

**AMENDMENTS TO CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the subject patent application.

**Listing of Claims:**

Claim 1 (currently amended). A composition of matter represented by the general formula



wherein Ln is selected from the group consisting of Sm, ~~Gd~~ and ~~Y~~;

Ln' is selected from the group consisting of La, Pr, Nd, Pm, Eu, Tb, Dy, Ho, Er, Tm, Yb and

Lu; A is selected from the group consisting of Mg, Ca, Sr and Ba,

$0.05 \leq x \leq 0.25$ ,  $0 \leq x' \leq 0.25$ ,  $0 \leq y \leq 0.03$ ,  $0.001 \leq z \leq 0.03$ ,  $0.05 \leq x + x' \leq 0.25$

$0.001 \leq y + z \leq 0.03$ , wherein  $\delta$  is a number which renders the composition of matter charge neutral.

Claim 2 (canceled). The composition of matter of claim 1 wherein Ln is Sm.

Claim 3 (original). The composition of matter of claim 1 wherein A is Mg.

Claim 4 (original). The composition of matter of claim 1 wherein  $0.1 \leq x \leq 0.2$ .

Claim 5 (original). The composition of matter of claim 1 wherein  $y = 0$ .

Claim 6 (original). The composition of matter of claim 1 wherein  $x' = 0$ .

Claim 7 (currently amended). A- composition of matter represented by the general formula  $\text{Ln}_x\text{Ti}_2\text{Ce}_{1-x-z}\text{O}_{2-\delta}$  wherein Ln is selected from the group consisting of Sm[, Gd and Y],  $0.05 \leq x \leq 0.25$ ,  $0.0025 \leq z \leq 0.02$  and  $\delta$  is a number which renders the composition of matter charge neutral.

Claim 8 (canceled). The composition of matter of claim 7 wherein Ln is Sm.

Claim 9 (canceled). The composition of matter of claim 7 wherein Ln is Gd.

Claim 10 (withdrawn). The composition of matter of claim 7 wherein Ln is Y.

Claim 11 (withdrawn). A method of manufacturing a solid electrolyte comprising a composition of matter having a density greater than 95% theoretical density represented by the general formula



wherein Ln is selected from the group consisting of Sm, Gd, Y, and mixtures thereof; Ln' is selected from the group consisting of La, Pr, Nd, Pm, Eu, Tb, Dy, Ho, Er, Tm, Yb and Lu; A is selected from the group consisting of Mg, Ca, Sr and Ba,  $0.05 \leq x \leq 0.25$ ,  $0 \leq x' \leq 0.25$ ,  $0 \leq y \leq 0.03$ ,  $0.001 \leq z \leq 0.03$ ,  $0.05 \leq x + x' \leq 0.25$ ,  $0.001 \leq y + z \leq 0.03$ , wherein  $\delta$  is a number which renders the composition of matter charge neutral, said method comprising the steps of.

(a) forming a mixture by mixing metal-containing materials corresponding to the metals in the composition of matter to establish the stoichiometric coefficients of the metals of the composition of matter;

(b) forming the mixture into a desired shape for the solid electrolyte; and

(c) sintering the desired shape at a temperature of less than or equal to 1600 °C to form the solid electrolyte having a density greater than 95% theoretical density.

Claim 12 (withdrawn). The method of claim 11 wherein the metal-containing materials are metallic oxides.

Claim 13 (withdrawn). The method of claim 12 wherein the metallic oxides have an average particle size of less than 5  $\mu\text{m}$ .

Claim 14 (withdrawn). The method of claim 11 wherein mixing is effected by a technique selected from the group consisting of attrition milling, vibratory milling, ball milling and high shear mixing.

**AMENDMENTS TO THE SPECIFICATION**

Kindly amend the Abstract of the Disclosure as follows:

The present invention relates to compositions of matter represented by the general formula



wherein Ln is selected from the group consisting of Sm, Gd, Y, ~~and mixtures thereof~~; Ln' is selected from the group consisting of La, Pr, Nd, Pm, Eu, Tb, Dy, Ho, Er, Tm, Yb, Lu;

A is selected from the group consisting of Mg, Ca, Sr and Ba,  $0.05 \leq x \leq 0.25$ ,

$0 \leq x' \leq 0.25$ ,  $0 \leq y \leq 0.03$ ,  $0.001 \leq z \leq 0.03$ ,  $0.05 \leq x + x' \leq 0.25$ ,  $0.001 \leq y + z \leq 0.03$ ,

wherein  $\delta$  is a number which renders the composition of matter charge neutral. The compositions can be formed into sintered bodies suitable for use as solid electrolytes in devices including solid-state oxygen generators. Such sintered bodies have greater than 95% theoretical density at temperatures at or below 1600°C, and can be produced by a solid-state method.

Kindly amend page 4, line 22 of the Specification to read as follows:

**[0012]** These objects are solved and other deficiencies of the prior art are overcome by a composition of matter represented by the general formula:



wherein Ln is selected from the group consisting of Sm, Gd, Y, and mixtures thereof; Ln' is selected from the group consisting of La, Pr, Nd, Pm, Eu, Tb, Dy, Ho, Er, Tm, Yb and Lu; A is selected from the group consisting of Mg, Ca, Sr and Ba, and  $0.05 \leq x \leq 0.25$ ,  $0 \leq x' \leq 0.25$ ,  $0 \leq y \leq 0.03$ ,  $0.001 \leq z \leq 0.03$ ,  $0.05 \leq x + x' \leq 0.25$  and  $0.001 \leq y + z \leq 0.03$ , and wherein  $\delta$  is a number which renders the composition of matter charge neutral.

Kindly amend page 8, line 1 of the Specification to read as follows:

**[0026]** The present invention relates to a composition of matter represented by the general formula:



wherein Ln is selected from the group consisting of Sm, Gd, Y, and mixtures thereof; Ln' is selected from the group consisting of La, Pr, Nd, Pm, Eu, Tb, Dy, Ho, Er, Tm, Yb and Lu; A is selected from the group consisting of Mg, Ca, Sr and Ba, and  $0.05 \leq x \leq 0.25$ ,  $0 \leq x' \leq 0.25$ ,  $0 \leq y \leq 0.03$ ,  $0.001 \leq z \leq 0.03$ ,  $0.05 \leq x + x' \leq 0.25$  and  $0.001 \leq y + z \leq 0.03$ , and wherein  $\delta$  is a number which renders the composition of matter charge neutral.